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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,084	09/12/2003	Douglas P. Goetz	55044US009	8857
32692	7590	05/04/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			ELEY, TIMOTHY V	
PO BOX 33427				
ST. PAUL, MN 55133-3427			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/662,084	<b>Applicant(s)</b> GOETZ, DOUGLAS P.	
	<b>Examiner</b> Timothy V Eley	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 8-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/12/03, 2/11/05</u> | 6) <input type="checkbox"/> Other: ____  |

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**DETAILED ACTION**

1. Applicant should note the patent number of the parent application mentioned in paragraph 1 of the specification.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 13 and 16 are vague and indefinite. Are the first and second plurality of rigid segments included in addition to the plurality of rigid segments recited in claims 1 and 15? Also, applicant recitation in claim 16 of "a first cross-sectional area" (lines 3 and 4) and "a second cross-sectional dimension" (line 9) is somewhat confusing. Applicant should refer to either an area or a dimension in both occurrences.
- "said rigid layer" (claim 14, line 1) lacks proper antecedent basis since it was not properly earlier referred to.
- "said plurality" (claim 17, line 2) lacks proper antecedent basis since it was not properly earlier referred to.

***Claim Rejections - 35 USC § 103***

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-7, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rutherford et al(6,007,407) in view of Breivogel et al(5,212,910).

- Rutherford et al discloses an apparatus and method for modifying the surface of a semiconductor wafer, the apparatus comprising; a fixed abrasive element(16) comprising a plurality of abrasive particles; a resilient element(14); and a rigid element(12) disposed between the fixed abrasive element and the resilient element. See figure 1 and column 7, lines 38-52.
- Rutherford et al does not disclose that the rigid element comprises a plurality of rigid segments.
- Breivogel et al discloses an apparatus for modifying the surface of a semiconductor wafer, the apparatus comprising; an element(22) for supplying a plurality of abrasive particles; a resilient element(20); and a plurality of rigid segments(22) disposed between the fixed abrasive element and the resilient element. See figure 5, and column 5, lines 62-end to column 6, lines 1-8. Breivogel et al specifically states that the plurality of rigid segments(22) "enables the pad to conform to

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longitudinal graduations across the wafer"(column 2, lines 44 and 45).

- Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Rutherford et al apparatus by replacing the resilient element and rigid element with the resilient element and rigid segments taught by Breivogel et al in order to enable the pad to conform to longitudinal graduations across a semiconductor wafer.
- Regarding claim 16, since applicant does not specifically recite the first cross-sectional "area" being different from the second cross-sectional "dimension", this feature is met by the combination of Rutherford et al in view of Breivogel et al.

#### ***Allowable Subject Matter***

6. Claims 8-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 13 and 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

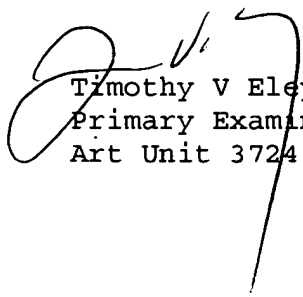
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- The cited prior art discloses apparatuses for modifying the surface of a semiconductor wafer.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy V Eley whose telephone number is 571-272-4506. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Timothy V Eley  
Primary Examiner  
Art Unit 3724

tve